1971 [redacted]

Vector

PACKAGING MATERIAL FOR INTEGRATED CIRCUITS

VECTOR ELECTRONIC COMPANY
INCORPORATED

WHAT IS THE VECTOR-PAK SYSTEM?

The Vector-Pak System for packaging circuitry facilitates quick assembly of electronic components, first in the breadboard stage, later in prototype form, with reliable inter-connection to all units, together with provision of suitable enclosures from the smallest modules to the rack mounted cabinet. All of this can be accomplished with attractive appearing, sturdy cases which lend a professional look to the final product.

NO TOOLING REQUIRED
The Vector-Pak assembly system calls for simple hand tools and methods such as are generally available in laboratories and small shops.

INVALUABLE FOR BREADBOARDING
New Pre-punched Micro-Vectorbord* and Micro-Plugbords with push-in terminals provide a quick and easy way of connecting all types of components together in a working circuit. Speeds production of Prototype Circuitry Assemblies and can be housed in one of the many Vector packages ranging from modular plug-in cases to rack mounted card cages.

MANY PRE-PRINTED PATTERNS AVAILABLE
Using circuit boards with copper lines, pads and plug tips already in place together with holes, connections are facilitated, and compact units result.

FULL PRINTED CIRCUITS CAN BE MADE BY THE USER
Etching kits are available from Vector for either the photo-resist process (positive type) or direct transfer resist for one of a kind. Many useful transfer patterns are supplied for this work. Thus the user can complete his printed circuit in a few hours.

PATCHING CONNECTIONS HELP THE EXPERIMENTER
Through the use of small patch cords and very small spring connector terminals, one can make quick circuit changes on even the smallest devices such as integrated circuits.

MAKES WIDE USE OF PLUG-IN MODULES
The Vector-Pak System enables full use of pluggable modules of many sizes, a widely approved technique throughout the industry.

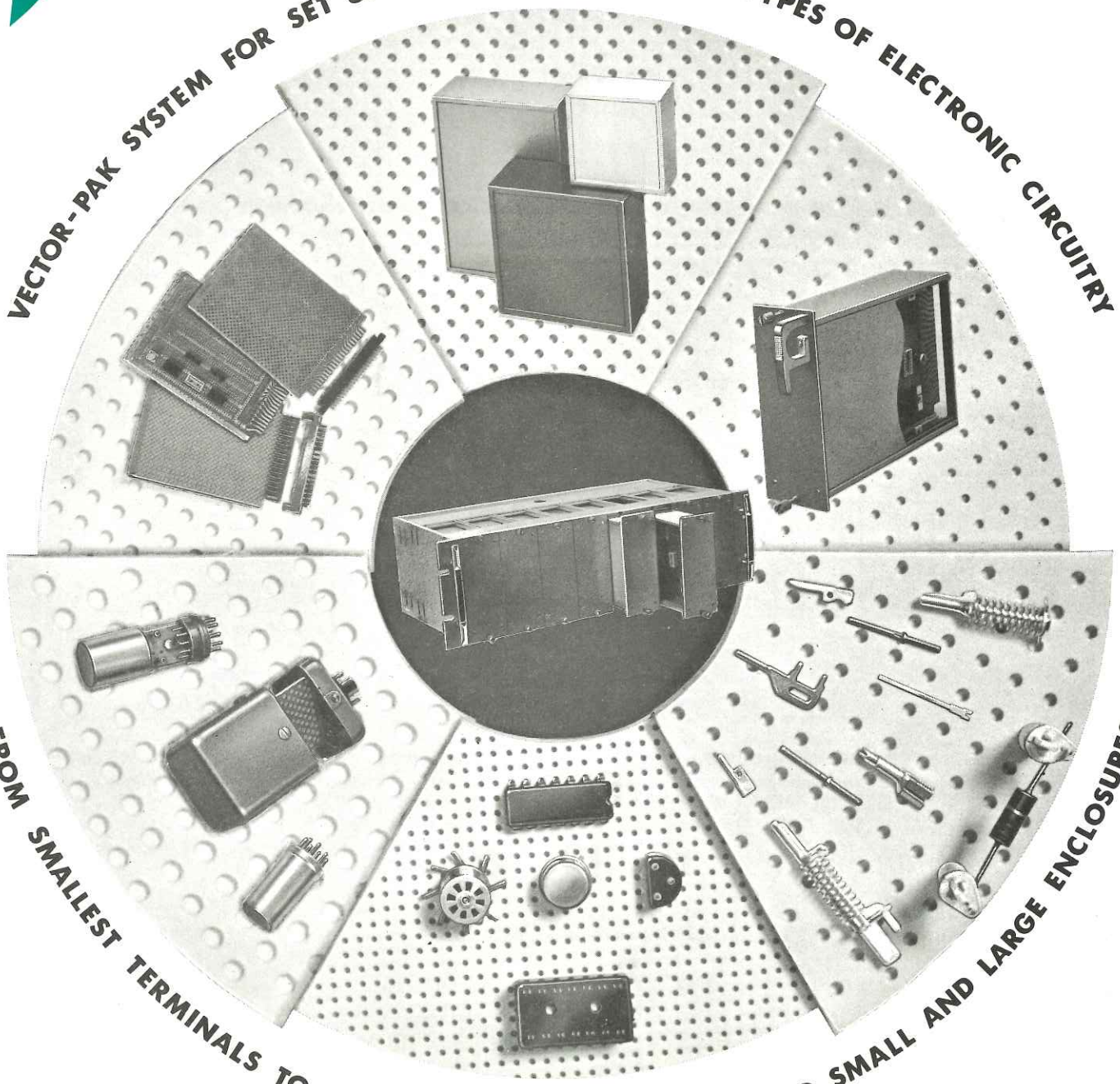
IN PRODUCTION
Custom fabricated Vector packages with your markings, finishes, connector provisions, etc. relieve you of the tedious and expensive creation of custom design and fabrication.

SAVES TIME, SAVES WORK, SAVES MONEY
The Vector-Pak System for packaging circuitry offers time and money saving advantages at every step of the project — from the beginning breadboard thru production. This system is so compatible with standard industry practices that you are free to use Vector products with other makes, if desired, to translate your ideas into viable, working parts.

You and your company can save time, work and money by utilizing the Vector-Pak System for your circuit packaging.

vector

VECTOR-PAK SYSTEM FOR SET UP AND PACKAGING ALL TYPES OF ELECTRONIC CIRCUITRY

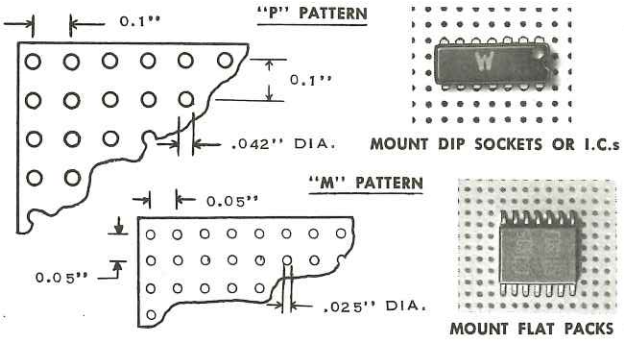


FROM SMALLEST TERMINALS TO SOCKETS TO PUNCHED CARDS TO SMALL AND LARGE ENCLOSURES

SHORT FORM CATALOG NO. 11

Vector Electronic Company
INCORPORATED

MICRO-VECTORBORD®



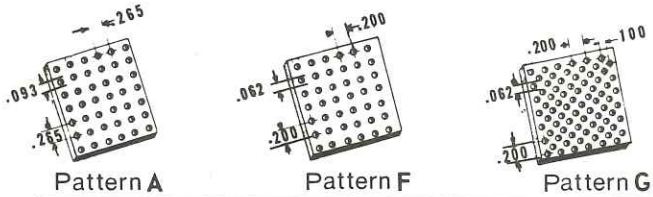
Micro-Vectorbord* has been specially designed to mount integrated circuits. "P" pattern accepts Dual-In-Line sockets or I.C.s; "M" pattern will accept flat pack leads. Many Vector terminals fit Micro-Vectorbord.* For material specification see block at right.

EXPLANATION OF MATERIALS FOR VECTORBORD* & MICRO-VECTORBORD*

Phenolic: Phenolic paper laminate Type PBE-P per Fed. Spec. L-P-513, flame retardant NEMA Grade FR-2.
All Epoxy Glass boards (WE) meet MIL-P-18177C Type GEE, NEMA Grade FR-4; except "P" and "H" which may be epoxy glass composite (GP).
Epoxy Paper laminate (EP) Type PEE per MIL-P-22324, flame retardant NEMA Grade FR-3.

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price 1-19
59P19-032	P	.042	2" x 6" x 1/32"	59 x 19	WE	$ .89
59P44-032	P	.042	4.5" x 6" x 1/32"	59 x 44	WE	1.61
64P44-062	P	.042	4.5" x 6.5" x 1/16"	64 x 44	WE	1.79
64P44-062EP	P	.042	4.5" x 6.5" x 1/16"	64 x 44	EP	1.69
84P44-062	P	.042	4.5" x 8.5" x 1/16"	84 x 44	WE	2.22
138P42-062EP	P	.042	4.5" x 13.9" x 1/16"	138 x 42	EP	3.26
169P44-062	P	.042	4.5" x 17" x 1/16"	169 x 44	WE	4.36
169P44-062EP	P	.042	4.5" x 17" x 1/16"	169 x 44	EP	3.83
169P47-062EP	P	.042	4.8" x 17" x 1/16"	169 x 47	EP	3.99
169P59-016	P	.042	6" x 17" x 1/64"	169 x 59	WE	5.69
169P59-047	P	.042	6" x 17" x 3/64"	169 x 59	WE	5.89
169P84-062	P	.042	8.5" x 17" x 1/16"	169 x 84	WE	7.99
169P84-062EP	P	.042	8.5" x 17" x 1/16"	169 x 84	EP	6.79
76M38-032	M	.025	2" x 4" x 1/32"	76 x 38	WE	.89
126M76-032	M	.025	4" x 6.5" x 1/32"	126 x 76	WE	2.29
168K38-032	K	.025	4" x 17" x 1/32"	(168 x 38) x 2	WE	4.89

VECTORBORD®



Pattern	Spacing	Pattern	Spacing	Pattern	Spacing
A	.265 Centers	B	.188 Centers	H	.100 Centers
C	.200 Centers	E	.141 Centers	G	.20 x .10
		F	.200 Centers		

Hole Dia.	Pattern	Hole Dia.	Pattern
.025"	M, K	.062"	B, E, F, G, H
.042"	P, Q	.093"	A, C

Versatile, economical, and easy-to-use Vectorbord* (Pre-Punched Terminal Board) having precision pre-punched holes at repetitive grid spacings is recommended for both experimental work and for many production jobs. Vectorbord* accepts eyelets, standard turned or Vector Push-in terminals as well as self tap screws for attaching necessary hardware. A complete line of such terminals is available from Vector. Save time, work, and money by using Vectorbord* and parts in your circuitry. May be sawed, drilled or punched.

Prices subject to change without notice.

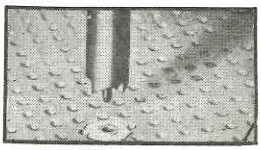
Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price 1-19
PHENOLIC						
18A18	A	.093	4.8" x 4.8" x 1/16"	18 x 18	Phenolic	$ .45
32A9	A	.093	8.51" x 2.41" x 1/16"	32 x 9	Phenolic	.47
32AA9	A	.093	8.51" x 2.41" x 3/32"	32 x 9	Phenolic	.62
32AA18	A	.093	8.51" x 4.8" x 3/32"	32 x 18	Phenolic	.87
64A18	A	.093	16.99" x 4.8" x 1/16"	64 x 18	Phenolic	1.30
64AA18	A	.093	16.99" x 4.8" x 3/32"	64 x 18	Phenolic	1.66
64AA32	A	.093	16.99" x 8.51" x 3/32"	64 x 32	Phenolic	2.86
45B30	B	.062	8.51" x 5.69" x 1/16"	45 x 30	Phenolic	.87
90B30	B	.062	16.97" x 5.69" x 1/16"	90 x 30	Phenolic	1.68
85C24	C	.093	16.99" x 4.8" x 1/16"	85 x 24	Phenolic	1.30
42G22	G	.062	8.51" x 4.5" x 1/16"	(42 x 22) x 2	Phenolic	.85
42G24	G	.062	8.51" x 4.8" x 1/16"	(42 x 23) x 2	Phenolic	.87
85G22	G	.062	16.99" x 4.5" x 1/16"	(85 x 22) x 2	Phenolic	1.52
85G24	G	.062	16.99" x 4.8" x 1/16"	(85 x 24) x 2	Phenolic	1.54
EPOXY GLASS						
64A18WE	A	.093	16.99" x 4.8" x 1/16"	64 x 18	WE	3.87
120E33WE	E	.062	17" x 4.8" x 1/16"	120 x 33	WE	4.15
175F99WE	F	.062	35" x 20" x 1/16"	175 x 99	WE	28.08
42G24WE	G	.062	8.51" x 4.8" x 1/16"	(42 x 23) x 2	WE	1.97
85G24WE	G	.062	16.99" x 4.8" x 1/16"	(85 x 23) x 2	WE	3.96
170H48GP	H	.062	17" x 4.8" x 1/16"	169 x 47	GP	3.98
170H48WE-032	H	.032	17" x 4.8" x 1/32"	169 x 47	WE	3.57
EPOXY PAPER						
32AA18EP	A	.093	8.51" x 4.8" x 3/32"	32 x 18	EP	1.64
64AA18EP	A	.093	16.99" x 4.8" x 3/32"	64 x 18	EP	3.05
64AA32EP	A	.093	16.99" x 8.51" x 3/32"	64 x 32	EP	5.39
120E33EP	E	.062	17" x 4.8" x 1/16"	120 x 33	EP	2.38
85F24EP	F	.062	16.99" x 4.8" x 1/16"	85 x 23	EP	2.28
85G24EP	G	.062	16.99" x 4.8" x 1/16"	(85 x 23) x 2	EP	2.28
85G42EP	G	.062	16.99" x 8.51" x 1/16"	(85 x 42) x 2	EP	3.95

* VECTORBORD is a registered trade mark of Vector Electronic Company.

COPPER CLAD VECTORBORD* FOR MOUNTING D.I.P. AND FLAT PACKS

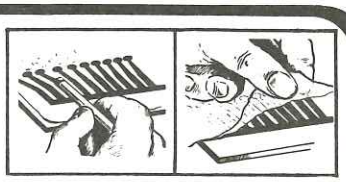
User can make his own etched circuits. Ideal for prototypes and many production uses. The last number in each part number indicates whether a board is clad on one or two sides. Phenolic is NEMA Grade FR-2 flame retardant 1 oz. copper clad paper base phenolic. Epoxy glass (WE) is flame retardant Type FL-GF per MIL-P-13949D 2 oz. copper clad. Epoxy paper (EP) is flame retardant Type FL-PH per MIL-P-13949D 2 oz. copper clad.

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Material	Price
PRE-PUNCHED						
3070-1WE	F	.062	6.5" x 4.5" x 1/16"	28 x 22	WEC1	$2.11
42F22C1	F	.062	4.5" x 8.51" x 1/16"	42 x 22	Phen. C1	1.04
85F42WEC1	F	.062	16.99" x 8.51" x 1/16"	85 x 42	WEC1	5.90
42G22WEC1	G	.062	8.5" x 4.5" x 1/16"	(42 x 22) x 2	WEC1	2.65
42G22WEC2	G	.062	8.5" x 4.5" x 1/16"	(42 x 22) x 2	WEC2	2.70
169P44-062C1	P	.042	17" x 4.5" x 1/16"	169 x 44	WEC1	5.89
169P44-062EPC1	P	.042	17" x 4.5" x 1/16"	169 x 44	EPC1	5.36
169P44-062EPC2	P	.042	17" x 4.5" x 1/16"	169 x 44	EPC2	5.75
UNPUNCHED						
CU45/30WE-1			4.5" x 3" x 1/16"		WEC1	.72
CU65/45-1			6.5" x 4.5" x 1/16"		Phen. C1	.62
CU65/45WE-1			6.5" x 4.5" x 1/16"		WEC1	1.39
CU65/45WE-2			6.5" x 4.5" x 1/16"		WEC2	1.58
CU85/45-1			8.5" x 4.5" x 1/16"		Phen. C1	.73
CU85/45WE-1			8.5" x 4.5" x 1/16"		WEC1	1.78
CU85/45WE-2			8.5" x 4.5" x 1/16"		WEC2	2.03



PAD CUTTER TOOLS for isolating terminals from rest of copper cladding leave copper "do - nut" around hole for solder tie. Shank type fits hand or machine drill chuck. Handle type for hand use.

Cat. No.	Pilot Pin Dia.	Ring O.D.	Handle	Price
P116	.055	.250	No	$1.85
P116A	.055	.188	No	1.98
P116B	.055	.250	Yes	2.45
P116C	.055	.188	Yes	2.58
P138A	.040	.125	Yes	2.58
P138C	.040	.125	No	1.98
P138D	.022	.125	Yes	2.58
P138E	.022	.125	No	1.98



RUB-ON RESIST facilitates making prototype etched circuits. Patterns transfer onto copper clad board. Various multipurpose assortments are available with lines, pads, circles and 43 contact connector. Withstands ferric chloride or ammonium persulfate etchant. See special assortments below.

Cat. No.	Description	$2.00 per Sheet
R322	All purpose sheet with connect. pattern	
R405	Sheet of assorted straight lines	
R406	Transistor Pad patterns	
R393A-1	Letters and numbers, black ink, Display and etch use	
R393A-2	Letters and numbers, white ink, Display and etch use	

Vector PUSH-IN TERMINALS HOLD SNUGLY WITHOUT STAKING

INBORD PINS TO FIT .025″ DIAMETER HOLES

K27A K27C

K27A is phosphor bronze, nkl. plt. gold fl. Pkg. 50 $.86 net Bulk $11.61 M net.

K27C is phosphor bronze, tintillate plate. Pkg. 50 $.69 net Bulk $8.20 M net.

Insertion tool P131A

K36A K36C

K36A is phosphor bronze, nkl. plt., gold flash. Pkg. 50 $1.25 Pkg. 1000 $17.98.

K36C is phosphor bronze, tintillate plate, Pkg. 50 $.95 Pkg. 1000 $14.50. Insertion tool P131A

K37A K37C

K37A is phosphor bronze, nkl. plt., gold flash. Pkg. 50 $.95, Pkg. 1000 $12.95.

K37C is phosphor bronze, tintillate plate, Pkg. 50 $.80, Pkg. 1000 $9.10. Insertion tool P131A

K32

K32 "J" Pin has long .025″ square tail for Wire-Wrap.* Tail can be used with patchcords, and soldered to connecting wires. Fits holes .025″ sq. and .042″ dia. Pins are phosphor bronze, .025″ sq. with 0.1″ spacing between legs. Tintillate plating. Pkg. 100 $1.49, Pkg. 1000 $11.50.

No insertion tool required.

*Gardner Denver T.M.

TERMINALS AND PINS TO FIT .042″ DIAMETER HOLES

T42-1

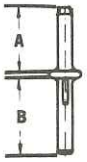
T42-1 Micro-Klip. Beryllium copper, Tintillate plating. Main slot holds 3 or 4 .025″ dia. wires. Hole in tab for .018″ transistor lead. Pkg. 100 $1.82, Pkg. 1000 $13.51. P149 insertion tool $1.49 ea.

T44

T44 Miniwrap Terminal has .025″ sq. Wire-Wrap* tail, extends 9/16″ beyond board surface to permit 5 #26AWG connections, 6 turns ea., Phosphor bronze, tintillate plate. Pkg. 100, $2.96. Pkg. 1000, $25.70. A13 Installation Tool, $1.69 ea. *Gardner-Denver Trade Mark.

K32

See description above right. Will not fit snugly in .042″ hole unless nestled in T42-1 terminal.



PART NO.	DIMENSION A	DIMENSION B	PKG. 50	PKG. 1000
K24A	.255	.375	$1.44	$20.59
K24C	.255	.375	.86	11.21
K26A	.160	.195	.92	13.16
K26C	.160	.195	.69	8.58
K31A	.160	.195	$ .99	$14.50
K31C	.160	.195	.79	9.50
K38A	.062	.600	1.49	25.50
K38C	.062	.600	.99	16.15

Material is phosphor bronze. "A" suffix indicates nickel, gold flash plating. "C" suffix indicates tintillate plating.

PUSH-IN TERMINALS TO FIT .062″ DIAMETER HOLES

T28

T28 Miniklip. Beryllium copper, tintillate plating. Holds up to 6 leads. Pkg. 100, $1.61, Pkg. 1000, $11.44.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A Insertion Tool with handle, $1.50.

T28-1

T28-1 Miniklip. Shorter version of T28. Tail extends .062″ beyond 1/16″ circuit board. Pkg. 100, $1.61, Pkg. 1000, $11.44.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A Insertion Tool with handle, $1.50.

T28-2

T28-2 Miniklip. Same as T28 except has slotted bottom end. Pkg. 100, $2.14, Pkg. 1000, $15.60.

Insertion Tool P91, shaft, no handle, $.50. Tool P91A, Insertion Tool with handle, $1.50.

T32A-1

T32A-1 Springclip. For fast, reliable circuit set ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $1.40. Pkg. 100, $10.30. Pkg. 1000, $78.00.

P136 Insertion Tool $1.20. **PATENTED**

PUSH-IN TERMINALS TO FIT .093″ DIAMETER HOLES

T9.4

T9.4 Zip Terminal. Holds wires in serrated slots until soldered. Half hard brass, tintillate plating. Pkg. 100, $1.44. Pkg. 1000, $10.18.

Insertion Tool P122B $1.40. **PATENTED**

T9.6

T9.6 Zip Terminal. Holds wires in serrated slot until soldered. Beryllium copper, tintillate plating. Pkg. 100, $2.40. Pkg. 1000, $15.66.

Insertion Tool P122B, $1.40. **PATENTED**

T30N-2

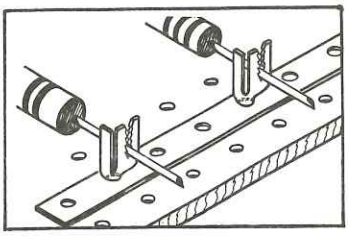
T30N-2 Springclip. For fast, reliable circuit set-ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $.99. Pkg. 100, $7.23. Pkg. 1000, $50.44.

Insertion Tool P92A, $.50 ea. **PATENTED**

T32A

T32A Springclip. For fast, reliable circuit set-ups without soldering. Half hard brass with steel spring, tintillate plated. Pkg. 10, $1.40. Pkg. 100, $10.30. Pkg. 1000, $78.00.

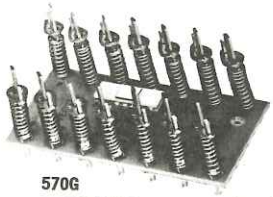
P136 Insertion Tool, $1.20. **PATENTED**



BUS STRIP

Prepunched narrow brass tinned strip mounts to prepunched boards with Zip Push-In terminals or screws. Make connections wherever required quickly.

Cat. No.	Description	Price
T57	16″ long. .093″ holes spaced .265″	$1.79 /Pkg. 10
T58	8″ long. .093″ holes spaced .265″	1.10/Pkg. 10
T104	17″ long. .062″ holes spaced .2″	1.21/Pkg. 10
T107	14″ long .042″ holes spaced .1″	2.39/pkg. 10

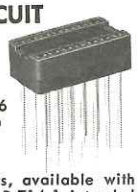


570G

SOLDERLESS SOCKETS save experimental time. Multiple connections can be made to any pin by connecting wires to corresponding SOLDERLESS SPRINGCLIP TERMINAL which is permanently connected to socket contact. Tube socket types mount on Vectorbord* with furnished hardware; 570B and 570G press fit in .093 holes spaced on .265 centers.

Cat. No.	Description	Price
567-1C	Solderless Octal Socket	$1.50
568-1C	Solderless Noval (9 pin) Socket	1.65
569-1C	Solderless Miniature (7 pin) Socket	1.35
570B	Solderless Universal Transistor Socket	1.20
570F	Solderless 12 Pin I.C. Breadboarding socket	3.95
570G	Solderless 14 pin D.I.P. Breadboard socket	3.95

INTEGRATED CIRCUIT SOCKETS (D.I.P.)

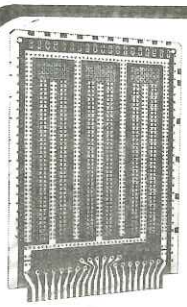


D.I.P. Socket
R-714 and R-716
Wire Wrap Type

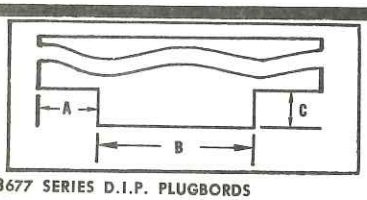
New D.I.P. R-714 Sockets, available with leads fitting .042 holes. R-714-1 intended for soldering directly to P.C. pads. R-716 and R-716-1 have 16 contacts and leads in similar arrangement, with 8 leads per side instead of 7.

CAT. NO.	DESCRIPTION	PRICE
R-714 (Pkg. 5)	Wire-wrap leads. 14 contacts on R-714, 16 contacts on R-716. Glass filled nylon, Phos. brz. nickel, gold plated contacts.	$4.90/pkg.
R-716 (Pkg. 5)		$5.90/pkg.
R-714-1 (Pkg. 5)	R-714-1, 14 contacts, R-716-1, 16 contacts. Nylon casting, Phos. brz. tin pltd. contacts.	$3.20/pkg. Short Tabs
R-716-1 (Pkg. 5)		$3.85/pkg. Short Tabs

Vector PLUGBORDS SPEED PLUG-IN CIRCUIT CONSTRUCTION



3677



3677 SERIES D.I.P. PLUGBORDS

Mount I.C. sockets and components (up to 24 D.I.P. units with 14 leads or 21 with 16). Supplied with overall punched grid of .042" diameter holes spaced .1" apart, etched buses 1 side for Vcc and ground plus 3 hole pad groups and individual pad areas are tinned. FR-4, epoxy glass per MIL-P-13949, Type FL-GF. Gold plated contacts (2 sides). Mate with R644 Receptacle.

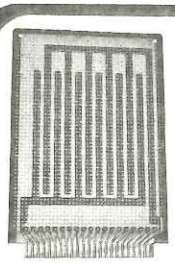
Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3677	44	9.6	4.5	.458	3.58	.375	$9.89
3677-2	44	6.5	4.5	.458	3.58	.375	8.84

838WE-1GN

DISCRETE COMPONENT PLUGBORDS ETCHED CONTACT TYPES

These boards are 4½" x 6½" x 1/16" and have an overall grid of .062" diameter holes on alternate .1" centers for easy component placement. 2 oz. etched copper contacts are available both gold plated and unplated for economy. T28 push-in terminals, conventional turned terminals, or eyelets may also be used. Boards are supplied in epoxy glass Type FL-GF per MIL-P-13949 on types with "WE" in part number and epoxy paper Type PX per MIL-P-13949 on all other types. Mate with R644 Receptacle. "GN" denotes Gold plated contacts.

Cat. No.	Contacts	L	W	Material	Notch Dimension A	B	C	Net Price 1-19 pcs.
838	43	6.5	4.5	Epoxy paper	.408	3.58	.375	$3.89
838-1	43	6.5	4.5	Epoxy paper	.458	3.58	.375	3.89
838A	22	6.5	4.5	Epoxy paper	.408	3.58	.375	2.81
838A-1	22	6.5	4.5	Epoxy paper	.458	3.58	.375	2.81
838AWE	22	6.5	4.5	Glass epoxy	.408	3.58	.375	3.17
838AWE-1GN	22	6.5	4.5	Glass epoxy	.458	3.58	.375	4.70
838WE	43	6.5	4.5	Glass epoxy	.408	3.58	.375	3.86
838WE-1GN	43	6.5	4.5	Glass epoxy	.458	3.58	.375	5.81

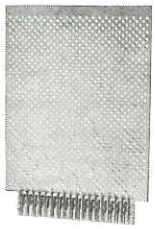


3682

3682 TYPE D.I.P. PLUGBORD

Will mount up to 54 D.I.P. sockets with 14 pin or 48 units with 16 pins. Overall grid of .042" diameter holes on .1" centers specially for Wire-Wrap* D.I.P. socket types and Vector T44 Miniwrap terminals. Etched buses one side for Vcc and ground are tinned. 3682-4 type has ground plane on back with etched clearance around each hole for lead isolation. FR-4, epoxy glass per MIL-P-13949 Type FL-GF, 2 oz. copper etched gold plated contacts (2 sides) mates with R644 Receptacle. *T.M. Gardner-Denver.

Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3682	44	9.6	4.5	.458	3.58	.375	$9.50
3682-2	44	6.5	4.5	.458	3.58	.375	8.49
3682-4	44	6.5	4.5	.458	3.58	.375	9.25

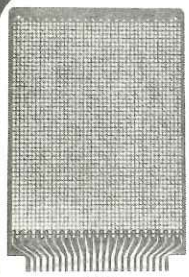


848WE

DISCRETE COMPONENT PLUGBORDS ELCO VARICON TYPE

These boards furnished with an overall grid of .062" holes on alternate .1" centers for easy component placement. Reliable Elco Varicon contacts are staked to bottom edge and mate with listed receptacles. T28 Push-In terminals or conventional turned terminals or eyelets may be used for component mounting. 812 and 837 types use single tier contacts. Material: Epoxy glass per MIL-P-18177, Type GEE.

Cat. No.	Contacts	L	W	Material	Notch Dimension A	B	C	Net Price
812	16	6.5	4.5	Epoxy paper	No notches			$2.98
812WE	16	6.5	4.5	Epoxy glass	No notches			3.53
837	12	4.5	3	Epoxy paper	No notches			2.33
837WE	12	4.5	3	Epoxy paper	No notches			2.58
848WE	35	6.5	4.5	Epoxy glass	.397	3.70	.750	6.09

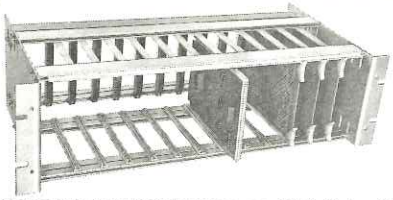


3662

UNIVERSAL TYPE 3662 AND 848PWE

Versatile D.I.P. type plugbords with boards punched in overall pattern of .042" diameter holes on .1" centers and furnished without any etched circuit pattern. Both models are FR-4, epoxy glass per MIL-P-13949 Type FL-GF. Model 3662 has 44 2 oz. etched gold plated contacts (total 2 sides). Mates with R644 Receptacle. Model 848PWE has 35 Elco Varicon contacts. Mates with R635 Receptacle.

Cat. No.	Contacts	Length	Width	Notch Dimension A	B	C	Net Price 1-19 pcs.
3662	44	6.5	4.5	.458	3.58	.375	$6.95
848PWE	35	6.5	4.5	.397	3.70	.750	6.29



VECTOR-PAK DISCRETE CARD GUIDE CAGE WITH VECTOR PLUGBORDS INSTALLED

Vector-Pak Card Guide Cages are 5¼" high x 9" deep x 19" wide slotted for rack mounting with six heavy extruded aluminum cross members, aluminum side walls, and will accommodate cards 3" to 4½" wide and up to 7⅞" in length. Infinitely variable connector mounting without drilling holes.

CCK-13 Cage is partially assembled for quick setup. This cage is supplied with discrete aluminum card guides to accommodate twenty cards at ¾" intervals. Guides can be easily adjusted for other spacing in multiples of ¼". $29.50 each.

CCK-3 Cage is partially assembled for quick setup. This cage has the same basic structure as CCK-13 but individual card guides are replaced with extruded aluminum guide plates with slots every .150" over entire width of cage. $23.75 each.

3474

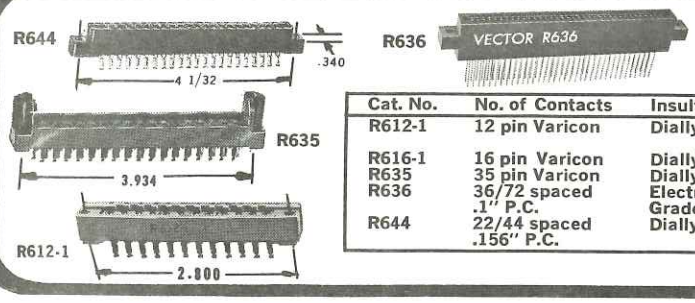
X-Y TYPE D.I.P. PLUGBORDS

2 oz. copper .070" wide etched tinned lines running vertically one side, horizontally reverse side, or vertically one side only ("Y" Type). Vertical lines interrupted to mount twelve 14 lead D.I.P.'s. Connections between board sides are made with soldered Inbord Pins or wires. Etched tinned lines can be cut with knife or line cutter tool P-139. Board material epoxy paper Type PX per MIL-P-13949. Gold plated contacts. All boards are 6.5 x 4.5 including aluminum Kardej Frame which fits 1/16" card guides.

Cat. No.	Matrix	Contacts	Mating Recept.	Notch Dimension With Kardej A	B	C	Net Price 1-19 pcs.
3474	X-Y	44 etched, 2 sides	R644	.458	3.58	.375	$10.50
3474-3	Y	22 etched, 1 side	R644	.458	3.58	.375	8.08
3476	X-Y	35 Varicon, 1 side	R635	.400	3.70	.750	11.40
3476-3	Y	35 Varicon, 1 side	R635	.400	3.70	.750	8.98
3477	X-Y	44 etched, 2 sides	R636	No notches			9.94
3477-3	None	44 etched, 2 sides	R636	No notches			7.54

EXTENDER 3690

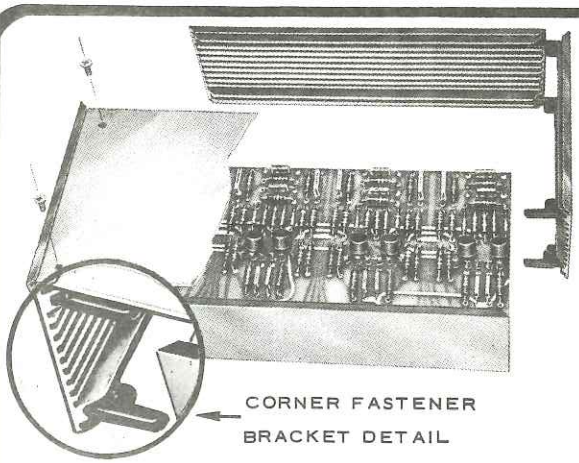
Extender permits operation of wired plugbords outside of card enclosures. Plug-in portion has 44 (total two sides) .156" spaced gold plated contacts connected to a 44 contact high grade permanently mounted receptacle mounted on top edge. Extender card is 4½" wide by 8" long by 1/16" thick, flame retardant epoxy glass. $11.30 ea. net.



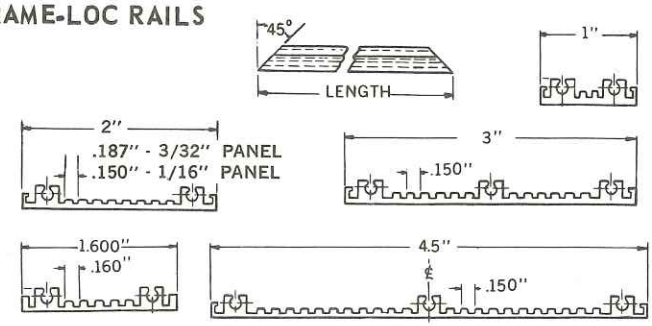
Vector RECEPTACLES

Cat. No.	No. of Contacts	Insultg. Mat'l.	Contact Plating	Description	Net Price
R612-1	12 pin Varicon	Diallyl Phthalate	Nickel Gold	Comb. .078" taper and solder tab	$2.08
R616-1	16 pin Varicon	Diallyl Phthalate	Nickel Gold	Solder tabs	2.60
R635	35 pin Varicon	Diallyl Phthalate	Nickel Gold	Solder tabs	5.35
R636	36/72 spaced .1" P.C.	Electrical Grade Phenolic	Contact Points Gold/Silver Alloy	Wire-Wrap* tabs, .025" sq.	4.70
R644	22/44 spaced .156" P.C.	Diallyl Phthalate	Sel Rex. .00003" gold flash	Single hole, solder tail tabs	2.97

* Gardner-Denver trade mark.



FRAME-LOC RAILS



Vector Frame Loc Rails are slotted aluminum rails with natural anodized finish designed to accommodate panels 1/16" or 3/32" in 2" width only. Rails may be used for making chassis and cases for circuit cards. Mitred lengths are furnished with push-in corner brackets plus corner gripping washers and screws for rigid fastening. Listed aluminum covers have four corner holes to pass screws into corner brackets.

PATENTED

EXTRUDED ALUMINUM RAILS FOR CHASSIS AND CASES

All rails have mitre cut ends and special fasteners except 24" length which have square cut ends. Prices are per pair

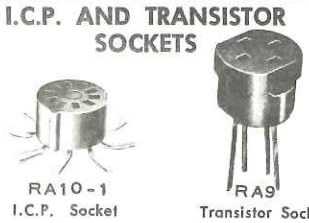
RAIL WIDTHS	RAIL LENGTHS: Square cut 24" long	3.1" long	4.6" long	4.9" long	6.6" long	8.6" long	10.0" long	17.1" long
1"	SR1-240-062 $2.93 pr.		SR1-46-062 $1.18 pr.		SR1-66-062 $1.40 pr.		SR1-100-062 $1.71 pr.	SR1-171-062 $2.44 pr.
1.6"			SR16-46-062 $1.39 pr.					
2"	SR2-240-062 $3.84 pr.	SR2-31-062 $1.23 pr.	SR2-46-062 $1.44 pr.	SR2-49-062 $1.46 pr.	SR2-66-062 $1.72 pr.	SR2-86-062 $1.92 pr.	SR2-100-062 $2.21 pr.	
2"*		SR2-30-093 $1.23 pr.	SR2-46-093 $1.44 pr.	SR2-48-093 $1.46 pr.	SR2-66-093 $1.72 pr.	SR2-85-093 $1.92 pr.	SR2-100-093 $2.21 pr.	SR2-170-093 $3.20 pr.
3"	SR3-240-062 $4.19 pr.		SR3-46-062 $1.52 pr.		SR3-66-062 $1.85 pr.		SR3-100-062 $2.32 pr.	SR3-171-062 $3.49 pr.
4½"	SR45-240-062 $5.92 pr.		SR45-46-062 $1.91 pr.		SR45-66-062 $2.40 pr.			

Quantity prices, special lengths and finishes available — consult factory.
* 2" width rail only with slots for .093" cards.

COVER PLATES (.064" Thick Aluminum)

Catalog No.	Length	Width	Price 1 - 49	Catalog No.	Length	Width	Price 1 - 49
PL2746	4.5	2.750	$ .48 each	PL4597	9.7	4.500	$1.22 each
PL4546	4.5	4.500	.63 each	PL8097	9.7	8.000	1.71 each
PL8046	4.5	8.000	1.01 each	PL27140	14.0	2.750	1.19 each
PL2766	6.5	2.750	.52 each	PL45140	14.0	4.500	1.31 each
PL4566	6.5	4.500	.69 each	PL80140	14.0	8.000	2.45 each
PL8066	6.5	8.000	1.25 each	PL48-170-Pkg 2	17.0	4.800	4.14 pair
PL48-85-Pkg 2	8.5	4.800	2.74 pair	PL85-170-Pkg 2	17.0	8.500	6.29 pair
PL2797	9.7	2.750	.70 each				

I.C.P. AND TRANSISTOR SOCKETS

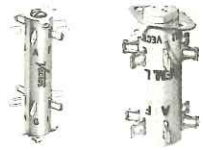


RA10-1 I.C.P. Socket — RA9 Transistor Socket

Transistor Sockets accept 4 leads on 0.2" diam. circle. MFE and Beryl. Cop. contacts.

I.C.P. Sockets fit TO-5 size 8 or 10 leads. Formed to insert in 0.1" spaced holes (P or H pattern bds.) D.I.P. body and Beryl. copper contacts.

CAT. NO.	NO. TABS	SADDLE	PRICE 1 - 49
RA-9	4	No	.38
RA-9.1	4	Yes	.65
RA-88-1	8	No	1.00
RA-10-1	10	No	1.07



10-12 8-A12T

Vector Socket, Terminal and Transistor Turrets simplify electronic construction. Faster wiring, greater component density and higher reliability are assured by their use. Transistor sockets accommodate 3 - in - line or "top - hat" transistors. Commercial types have mica filled sockets, hot tin dipped steel saddles and XXXP phenolic turret posts with brass tinned terminals. Military types (premium grade) have MIL sockets with beryllium copper silver plated socket contacts, brass nickel plated hot tin dipped saddles and glass silicone turret posts with tinned brass terminals.

PATENTED

POST SOCKET TURRETS

Catalog Numbers Comm. Types	Military Types	Turret Details Height	No. of Term.	No. of Rings	Space Between Rings	Net Price Comm. Type 1-49
OCTAL SOCKET TURRETS						
8-0-9T	681	2"	9	2	1"	$ .68
10-0-9T	683	2½"	9	2	1⅜"	.72
7-PIN SOCKET TURRETS						
6-M-6T	687	1½"	6	1	—	.72
8-M-9T	688	2"	9	2	1"	.79
9-PIN SOCKET TURRETS						
6-N-6T	693	1½"	6	1	—	.72
8-N-9T	694	2"	9	2	1"	.79
TERMINAL TURRETS						
8-12	677	1-27/32"	12	2	1"	.66
10-12	678	2"	12	2	1⅜"	.70
TRANSISTOR TURRETS						
8-A-12T		2-11/32"	12	2	1⅜"	1.23

Note: Tolerance on dimensions 1/16"

Longer or shorter types and other terminal configuration to order.

VECTOR-STRUT CAGES

Vector-Strut Cages are uniquely adjustable aluminum frames designed for mounting in 19″ equipment racks which accommodate "EFP" Modules shown **right** , or cards. Vector Strut Cages are sold in kit form in three heights, 3 15/32″, 5 7/32″, 8 23/32″, and three depths, 8.975″, 11.975″, and 15.725″. Kits consist of the side walls, cross members (Triple T Struts) and brackets, plus necessary assembly hardware. Extruded aluminum card and case guides, EFP Modules, and handles are ordered separately as required.

Ordering Information

CA-52-HE-89 General Purpose Module Cage Kit 5¼″ high with 9″ long sidewalls for 19″ rack mounting.

CMG-7 Kit of case guides and mounting hardware to mount eight 2″ wide EFP modules in **CA-52-HE-89** Cage above.

CMG-4 Kit of case guides and mounting hardware to mount ten 1.6″ wide EFP Modules in **CA-52-HE-89** Cage above.

Completely Assembled Module Cages

CMA-3-20 completely assembled cage consisting of all parts supplied in CA-52-HE-89 and CMG-7 above. (Modules must be ordered separately.)

CMA-3-16 completely assembled cages with guides installed for ten 1.6″ wide EFP Modules. (Modules must be ordered separately.)

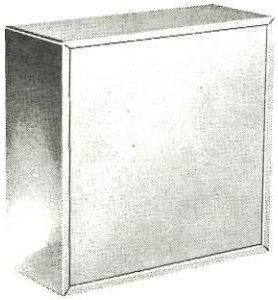
Many other sizes and types available from stock. Contact factory.

VECTOR "EFP" (EXTENDED FRONT PANEL) CASES

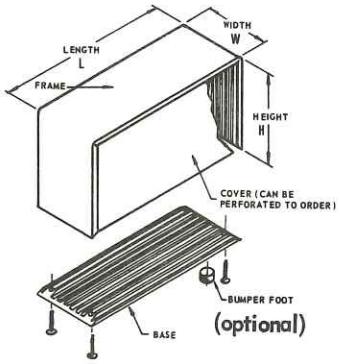
Vector "EFP" aluminum module cases are made in many sizes to accommodate circuit boards from 2.7″ to 7.9″ wide and 4.6″ to 14″ long. All EFP cases will fit Vector Strut Cages. EFP cases have identical top and bottom extruded rails with parallel .062″ longitudinal grooves spaced for holding circuit boards, slide out .062″ side covers, front and rear panels. Captive thumb screws are provided. Order eight EFP-204-6.6 Cases for CMA-3-20 Cage at $6.07 per case.

Order 16 EFP-164-6.6 Cases for CMA-3-16 Cage at $5.90 per case.

MULTI-MOD CASES



W20 -46 -46

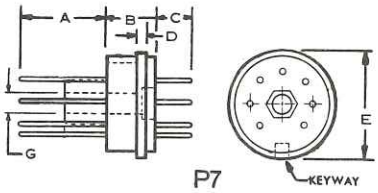


PATENTED FEATURES

Sleek sturdy aluminum cases with .075″ wide slots on .150″ centers across case width for effortless screw free mounting of cards or shielding panels. Easily removable 4th side permits side cover to slide off and provides quick access to cards. Good RFI shielding provided by overlapping cover joints. Clear anodized finish is standard.

CAT. No.	WIDTH	LENGTH	HEIGHT	FOR CIRCUIT CARD SIZE	PRICE 1 - 49
W16-31-31	1.6″	3.10″	3.10″	2.98 x 2.98	$ 3.41
W20-46-31	2.0″	4.61″	3.10″	2.98 x 4.50	3.93
W20-46-46	2.0″	4.61″	4.61″	4.49 x 4.50	4.34
W20-66-46	2.0″	6.61″	4.61″	4.49 x 6.50	5.15
W30-66-46	3.0″	6.61″	4.61″	4.49 x 6.50	5.95
W30-86-46	3.0″	8.61″	4.61″	4.49 x 8.50	6.50
W30-100-46	3.0″	10.00″	4.61″	4.49 x 9.89	7.00
W30-100-66	3.0″	10.00″	6.61″	6.49 x 9.89	7.80
W30-100-80	3.0″	10.00″	8.00″	7.88 x 9.89	8.35
W30-140-80	3.0″	14.00″	8.00″	7.88 x 13.89	10.10
W45-66-46	4.5″	6.61″	4.61″	4.49 x 6.50	6.15
W45 86-46	4.5″	8.61″	4.61″	4.49 x 8.50	6.95
W45-100-46	4.5″	10.00″	4.61″	4.49 x 9.89	7.60
W45-140-80	4.5″	14.00″	8.00″	7.88 x 13.89	11.78
FT-3-Pkg 8		Rubber Bump Feet			.40 Pkg

TUBE BASE PLUGS

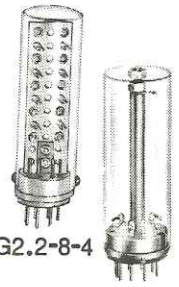


P7

VECTOR TUBE BASE PLUGS fit standard 7-pin miniature, 9-pin noval, and 14-pin relay sockets. Round metal cans may be attached with screws to sides. Plugs are mica filled phenolic with phosphor bronze .040″ diameter tinned pins. All except K1.14 have center screw hole ⅛″ and recessed bottom cavity for small pattern nut on under side.

Catalog No.	Type	DIMENSIONS A	B	C	D	E	Net Price 1-49
P7	7 p. min.	17/32	.300	.265	1/16	.621	$.47
P9	9 p. nov.	17/32	.300	.265	1/16	.748	.52
K1.402	(same as P9 except no center post)						.52
K1.334	7 Pin hooked		.300	.265	1/16	.621	.53
K1.434	9 Pin hooked		.300	.265	1/16	.748	.58
KR1.334	(same as K1.334 except with retaining ring)						.62
KR1.434	(same as K1.434 except with retaining ring)						.67
K1.14	14 pin	17/32	.300	.265	1/16	.750	.99
KF1.335	(Similar to K1.334 except has knurl nuts and no keyway.)						.87
KF1.435	(Similar to K1.434 except has knurl nuts and no keyway.)						.96

ROUND AND SQUARE PLUG-INS



G2.2-8-4

G2.1-8

C12-KI.02
(with 514)

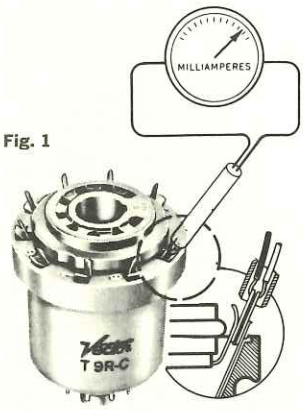
Ideal for packaging hand wired, printed, or solid state plug-in modules. Aluminum cases provide shielding and strength. Wide variety of internal structures eases circuit wiring. 7-, 8- and 9-pin plugs are standard. 14-pin is relay type. Plug key in square Octal based units points toward case corner.

Catalog No.	Bottom Plug	Case Type	Case Height (Less Prongs)	Internal Structure	Net Price 1-49
B-8	8 P. Oct.	1.42″ Sq.	2″	None	$1.56
B-10	8 P. Oct.	1.42″ Sq.	2.5″	None	1.57
B-10-N	8 P. Oct.	1.42″ Sq.	2.5″	Turret	2.46
B-10-T	8 P. Oct.	1.42″ Sq.	2.5″	Turret	1.90
B-10-4†	8 P. Oct.	1.42″ Sq.	2.5″	Card W/Terms.	2.19
C-10	8 P. Oct.	2″ Sq.	2.5″	None	1.50
C-12	8 P. Oct.	2″ Sq.	3″	None	1.44
C-12K1.02	8 P. Oct.	2″ Sq.	3″	None	1.10
511 (Terminal Card 1.9″ x 2.7″)†					.69
514 (Terminal Card 1.9″ x 2.7″)†					.91
C-12-T	8 P. Oct.	2″ Sq.	3″	Turret W/12 Lugs.	2.11
C-12-4†	8 P. Oct.	2″ Sq.	3″	Card W/Terms.	3.14
G2-10	8 P. Oct.	1.25″ Rd.	2.5″	None	1.16
G2-10-4†	8 P. Oct.	1.25″ Rd.	2.5″	Card W/Terms.	2.46
G2.1-8	9 P. Min.	.75″ Rd.	2″	Spacer	1.45
G2.1-8F	9 P. Min.	.75″ Rd.	2″	None	1.49
G2.1-8-4†	9 P. Min.	.75″ Rd.	2″	Card W/Terms.	2.30
G2.2-8F	7 P. Min.	.625″ Rd.	2″	None	1.49
G2.2-8-4†	7 P. Min.	.625″ Rd.	2″	Card W/Terms.	2.28

†511 has .093″ holes spaced .265″; 514 has .062″ holes, spaced alt. 0.1″ Ctrs.; B-10-4 has wall 1.37″ (W), 1.87″ (L), W/.093″ holes spaced .265″ Ctrs. Trmls.; C-12-4 has wall 1.88″ (W), 2.37″ (L), W/.093″ holes spaced .200″ x .265″ Ctrs., Trmls.; G-2-10-4 has wall 1.08″ (W), 1.78″ (L), W/.093″ holes spaced .250″, Trmls.; G2.1-8-4 has wall .60″ (W), 1.62″ (L), W/.062″ holes spaced .141″ Ctrs., Trmls.; G2.2-8-4 has wall .46″ (W), 2″ (L), W/.062″ holes spaced .141″ Ctrs., Trmls.

Vector TUBE SOCKET TEST ADAPTERS AND EXTENDED TUBE SOCKET TEST ADAPTERS

Fig. 1



T9R-C
WITH P-2 PROBE

Fig. 2

T9N

Fig. 3

T7MS

Fig. 4

TX-8-O
OCTAL

VERSATILE CURRENT TEST ADAPTER TYPE Fig. 1

Versatile VECTOR CURRENT TEST ADAPTERS make possible tube circuit current or voltage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis. Vector Current Test Adapters have two spring test tube elements for each pin. These test tube elements break the circuit when a dual-sided probe is inserted in test position. Probes are gripped by the test tabs and need not be held in position. Current is read at the meter where the two test leads are connected. The same test adapters and probe also permit voltage and wave form readings on any pin position, merely by connecting the leads jointly to the meter. The adapters have mica-filled shell and keyways, and may be used in a horizontal or vertical position.

TUBE SOCKET TEST ADAPTERS — REGULAR Fig. 2

Similar to above adapters, except used to measure voltage and waveforms. Probe fits into tab holes which grip probe lead. High quality beryllium copper silver contacts and low loss mica filled phenolic shells. Adapters fit inside tube base shields and tube clamps.

TUBE SOCKET TEST ADAPTERS — SHIELDED TYPE Fig. 3

For most work the short, unshielded adapters are adequate. For hard to reach locations or where surrounding equipment restricts use of regular test adapters, the 3 to 4 inch extended adapter may be used. In these the leads between plug and socket are individually shielded to minimize coupling.

EXPERIMENTER'S AND MODIFICATION ADAPTERS Fig. 4

EXPERIMENTER'S TEST ADAPTERS. These are similar to the Socket Test Adapter but are less the shells and tabs so that connections can be cross-connected in any desired way. User must solder connections. Different plug and socket combinations available.

SOCKET EXTENDERS (NOT ILLUSTRATED)

SOCKET EXTENDERS provide a replaceable unit for use in tube testers and expensive meters. Wear is shifted from the socket in the tester to the one in the extender. Sockets have beryllium copper silver plated contacts for long life. An all molded outside shell is used with socket leads soldered to plug pins.

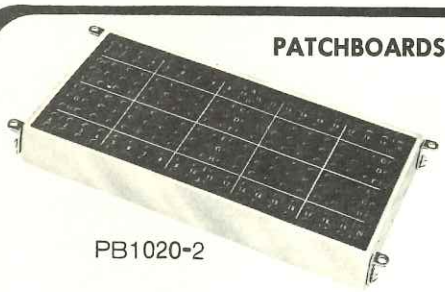
ORDERING INFORMATION

Cat. No.	Type	Length Less Prongs	Net Price 1-19
CURRENT TEST ADAPTERS			
T-7-M-C	7 Pin Miniature		$3.04
T-8-O-C	8 Pin Octal		3.83
T-9-N-C	9 Pin Noval		3.24
T-9-R-C	9 Pin Novar		3.65
T-12-C	12 Pin Compactron		3.95
P-2	Dual Sided Plug-in Probe, required for above. Any quantity.		1.09
T-789-C	Set of First 3 Adapters with P-2 Probe in Case		11.69
T-912-C	Set of Novar and Compactron Adapters With P-2 Probe in Case		9.89
TUBE SOCKET TEST ADAPTERS — REGULAR			
T-7-M	7 Pin Miniature	1.50″	1.85
T-8-O	8 Pin Octal	1.50″	1.95
T-9-N	9 Pin Noval	1.50″	1.95
T789	Set of types T-7-M, T-8-O, T-9-N, P1 in case.		6.27
TUBE SOCKET TEST ADAPTERS — SHIELDED TYPE			
T-7-M-S	7 Pin Miniature	3.25″	5.91
T-8-O-S	8 Pin Octal	4.00″	6.60
T-9-N-S	9 Pin Noval	3.25″	6.60
T-789-S	Set of above in Case with P1		19.47
P1	Plug-in Probe with 30″ lead		.52

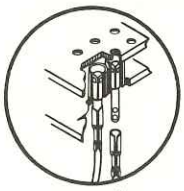
Experimenter's Test Adapters and Socket Extenders

Cat. No.	Socket Type	Net Price 1-19	Cat. No.	Socket Type	Net Price 1-19
TX-8-O	Octal	$2.47	1262	8 P. Octal	$1.95
TX-7-M	Miniature	.88	1263	9 P. Noval	1.75
TX-9-N	Noval	.94	1264	7 P. Miniature	1.75

PATCHBOARDS



PB1020-2



DETAIL

PATCHCORD
K2.06

JUMPER PLUG
K2.02-1

PIGGY-BACK
PATCHCORD

Vector Fixed Panel style Patchboards provide simple but reliable low-cost units for multiple connection, single conductor patching for test panels, automation and telemetry equipment, low cost computers, numerical control equipment, paging and speaker systems or other equipment where economy and connection multiplicity are desired.

Extremely low contact resistance (less than .001 ohms) and long contact life (over 2000 insertions per contact without resistance change) assures reliability.

All boards are marked front and back with horizontal rows lettered alphabetically and vertical columns numbered. Brackets for mounting are supplied.

Holes for plugs are .093″ diameter, spaced on .265″ centers. Front panels are removable and may be changed if necessary. Larger contact systems can be made by mounting standard panels adjacent. Special sizes, special marking and screening in colors are made to order at minimum cost.

SPECIFICATIONS:

Panels: Black XXXP phenolic, Type PBE-P. Grade EXXXP per MIL-P 3115, .093″ thick with silkscreened white numbers and letters.

Contacts: Beryllium copper, nickel plated gold flashed, 2 holes for soldering on leads. Add letter "A" to Cat. No. if Wire-Wrap*tabs are desired.

Patchcords: Plugs .087″—.091″ diameter x .468″ long, nickel plated with standard #20 gage wire vinyl insulation. 6″ black, 9″ yellow, 15″ blue.

Cat. No.	No. of Contacts	Hole Layout	L W THK	Net Price 1-49
PB33-2	9	3 x 3	1.130 x 1.130 x 1″	$ 2.95
PB110-2	10	10 x 1	2.985 x .600 x 1″	3.25
PB210-2	20	20 x 2	2.985 x .865 x 1″	4.25
PB510-2	50	10 x 5	2.985 x 1.660 x 1″	6.45
PB1010-2	100	10 x 10	2.985 x 2.985 x 1″	10.85
PB1020-2	200	20 x 10	5.635 x 2.985 x 1″	21.60
PB1520-2	300	20 x 15	5.635 x 4.310 x 1″	32.35
*K2.06	Patchcord, single contact ea. end 6″ (25 per bdl.)			bdl/3.04
*K2.09	Patchcord, single contact ea. end 9″ (25 per bdl.)			bdl/3.08
*K2.15	Patchcord, single contact ea. end 15″ (25 per bdl.)			bdl/3.53
†K9.06	Patchcord, Piggy-back each end 6″			ea. .93
†K9.09	Patchcord, Piggy-back each end 9″			ea. .93
†K9.15	Patchcord, Piggy-back each end 15″			ea. .93
*K2.02-1	Jumper Plug, Jumper type (25 per bdl.)			bdl/3.35
1723/41	Solderless slip on contact for rear connection			$38.50/M
P115	Crimping tool for above contact			Contact factory

*Net any quantity †Net price 1-999 *Gardner Denver T.M.

Removable Pre-Programming Patchboard and patchcords also available with 204, 300, 450, 600 and 1200 contacts. Write factory.

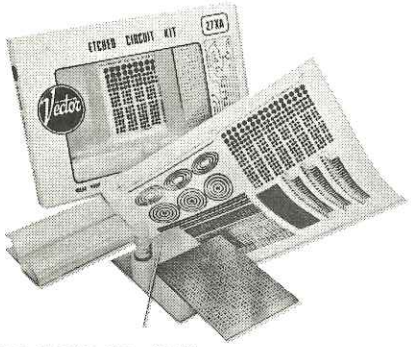
32X PHOTORESIST ETCHED CIRCUIT KIT

32X DIRECT POSITIVE PHOTORESIST ETCHING KIT — $8.95

Designed to produce in minimum time one or more sharply detailed etched circuit boards from easily made master positive. (This process differs from most other systems which use **NEGATIVE** acting photoresist.) Positive artwork is used with no photography or special darkroom required. Special integrated circuit patterns provided. Apply transfer patterns to mylar film for master positive, place on pre-photo-sensitized Vectorbord® and expose to suitable light source such as photoflood or sunlight. Developing quickly done in solution and tray provided. High speed etching with virtually no under-cutting is provided by vigorously shaking board and chemicals in closable plastic box.

KIT CONTENTS: One 4.5" x 6.5" and one 4.5" x 2.73" copper clad (1 side) phenolic board sensitized with **POSITIVE** acting photoresist, developer, etchant, transfer patterns, mylar sheet, cut and peel sheet, touch-up resist and brush, developing tray, and glass exposure plate.

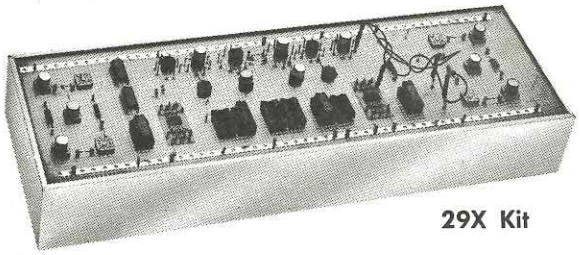
27XA ETCHED CIRCUIT KIT
RESIST APPLIED DIRECTLY TO COPPER



27XA ETCHED CIRCUIT KIT—**$6.50**

LOW COST—FAST—HAS EVERYTHING EXCEPT HOT WATER. Specially designed for lab use in making uncomplicated etched circuits. Kit built around Vectoresist, Vector's rub-on resist transfer sheet. Resist lines, dots, or connector pattern transfer by rubbing to furnished 1 oz. copper clad prepunched boards in minutes. Then etch in etchant furnished in heavy plastic bag with special activator in as little as 30 minutes. Kit includes 2 copper clad boards, 4½" x 6½", 2 bags of etchant, 8½" x 11" sheet rub-on Vectoresist, layout paper, complete instructions. See Kit Accessories page for Vectoresist details.

INTEGRATED CIRCUIT EXPERIMENTER'S KITS



29X Kit

PATENTED FEATURES

The 30X Kit is a compact assortment similar to the popular Vector 20X Kit except that it is adapted for use with integrated circuits and other semi-conductor devices. Contains 8.6" x 4.6" extruded aluminum Frame-Loc Rail Chassis with "P" Pattern Micro-Vectorbord having .042" dia. holes on .1 ctrs., chassis bus strips, 100 Micro-Klip T42-1 terminals and one P149 Installing Tool, 50 K32 "J" terminals for Wire-Wrapping*, bare and insulated hook-up wire, 2 sheets grid layout paper and adhesive to mount D.I.P. sockets. $10.75. *T.M. Gardner-Denver.

Kit 31X provides a larger Micro-Vectorbord®, 4½" x 17", holes .042" dia., spaced .1" ctrs., with Frame-Loc Chassis, and a larger assortment of hardware. In addition to hardware supplied in 30X Kit, there are 50 K24C Inbords Pins, two B20F pot and switch mounting brackets, with mtg. screws, lockwashers and nuts and four additional sheets of grid layout paper supplied. $17.50.

Kit 30XA provides I.C. mounting at minimum cost with an 8½" x 4½" "P" Pattern Micro-Vectorbord, as with 30X Kit, mounting supports and 100 T42-1 Micro-Klip terminals and installing tool. $4.50.

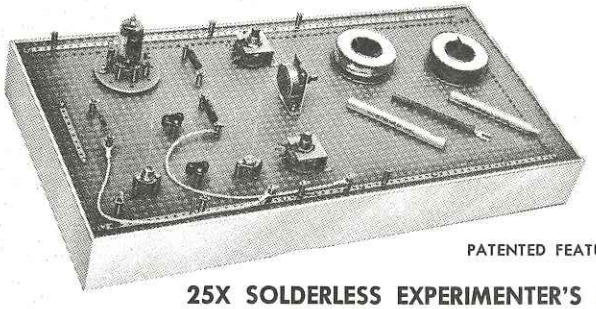
The 29X Kit is a special group of new Vector products especially designed for fast, easy hookups of nearly all package configurations of integrated circuits. The mounting surface is a pre-punched Micro-Vectorbord* having .042" diameter holes on 1/10" grid spacings supported on Vector Frame-Loc Rails 2" high. Dual-in-line packages may be fastened directly to the breadboard with the tails extending through the holes; or special sockets supplied may be used which have square tails which also push into the board. Integrated circuits of the TO-5 type may also be mounted with wafers, which are supplied, or in sockets supplied with leads formed to plug into the board. Transistor sockets whose leads also fit the board are supplied. Supplied T42-1 Micro-Klip push-in terminals fit board holes and are ideal for mounting discrete components of various types. Inbord Pins of .040" diameter also push into the holes for tie points or plug points. Wiring of these leads may be done by use of supplied polyurethane coated solderable wire which may be wrapped around the terminals and soldered through the insulation or by "Daisy Chain" patch cords which will connect directly to the Wire-Wrap* tabs or other pins, thus facilitating quick experimental connection. Flatpacks with .05" spaced leads may also be mounted by use of furnished adapter plates which plug into the holes of the breadboard. These will normally be soldered to the adapter plate terminals. **$59.75.** *Gardner-Denver Trade Mark.

KIT CONTENTS

14- and 16- pin DIP Sockets, TO-5 ICP Sockets, Transistor Sockets, Flatpack Adapter Plates, T42-1 ZIP Terminals, K24C Inbord Pins, Adapter Wafers, "Daisy Chain" Patchcords, DIP Extractor Tool, P149A Insertion Tool for T42-1 Terminals, Bus Strips, Layout Paper, Special Contacts, assorted wire, miscellaneous mounting hardware and P pattern Micro-Vectorbord.*

* T.M.

VECTOR BASIC MODEL EXPERIMENTER KITS



PATENTED FEATURES

25X SOLDERLESS EXPERIMENTER'S KIT

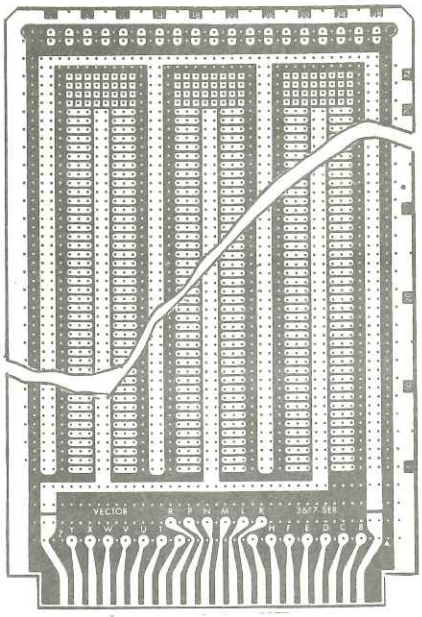
25X SOLDERLESS TUBE AND TRANSISTOR EXPERIMENTER'S CHASSIS KIT- **$21.45** Dual type solderless kit with full complement of tube and transistor sockets. Belongs in every electronics lab. Differs from other Vector kits because it includes large number of Solderless U-Clip terminals and special solderless connectors for pots and switches, plus more of all other components. Detail of contents: 8½" x 17" x 2" Extruded Aluminum chassis frame with 3/32" Vectorbord deck, 2 power and 6 universal transistor sockets with pigtails, 3 each 7 and 9 pin tube sockets, 2-8 pin octal; 100 Zip Push-In Terminals, 90 Solderless Springclip terminals, 10 Solderless U-Clips, 10 hookup patchcords, bus strip, 8 wafers to make solderless sockets, terminal installing tools, bare and insulated wire, grid layout paper, 4 pot and switch brackets, 204 assorted screws, nuts, brackets. Board has 3/32" dia. holes on .265" centers.

22X KIT FOR TRANSISTOR CIRCUITRY—Special parts assortment for transistor circuitry. 4.8" x 8½" x 2" extruded aluminum Frame-Loc Chassis rail with 3/32" Vectorbord deck. Transistor sockets include 2 power type, 6 universal type, 75 Zip Push In Terminals, 20 Solderless Springclip terminals, 6 hookup patchcords, bus strip, terminal installing tools, bare and insulated hookup wire, 4 pot and switch brackets, 134 assorted screws, nuts, spacers, brackets. Board as above. **$11.50**

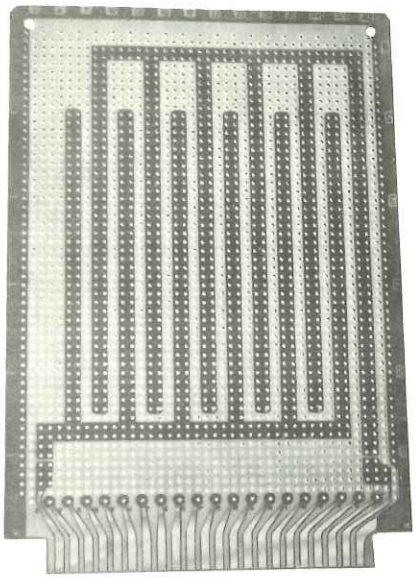
22XA– **$28.00** (Not illustrated)—Larger professional sized version of 22X above. Chassis extruded Aluminum Frame-Loc type 17" x 8½" x 2" with Vectorbord deck. Includes 2 power transistor sockets, 6 universal type transistor sockets with pigtail leads, 124 Zip Push-In Terminals, 100 Solderless Springclips, 18 Solderless U-Clips, 14 hookup patchcords, bus strip, terminal installing tools, bare and insulated wire, layout paper, 4 pot and switch brackets, 160 assorted brackets, screws, nuts. Board as in 25X Kit.

21X KIT BASIC MODEL FOR LABS—Large 4.8" x 17" x 2" new extruded aluminum Frame-Loc Rail chassis with 3/32" Vectorbord deck. Besides main deck, includes 2 extra Vectorbord pieces, more terminals and sockets. Detailed contents follow: 6 Transistor sockets include 2 power and 4 universal type; 3 each 7 and 9 pin skt. and 2 octal, 100 "Zip" Push-In Terminals, 50 solderless Springclips, 8 hookup patchcords, bus strip, terminal installing tools, grid layout paper, 4 pot and switch brackets, bare and insulated hookup wires, assorted screws, nuts, brackets, spacers. Board has 3/32" dia. holes on .265" ctrs. **$16.75**

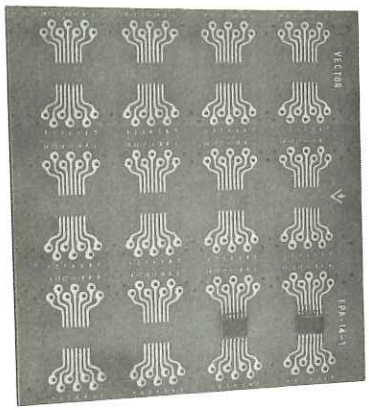
20X STARTER ASSORTMENT — 4.8" x 8½" x 2" extruded aluminum Frame-Loc Chassis with 3/32" thick Vectorbord deck plus many other parts including: 3 each 7 and 9 pin tube sockets and 2 octal sockets with mounting hardware; 75 patented T9.4 Zip Push-In Terminals; 20 new T30N-2 Solderless Springclip with hand insertion tool; 3 sheets layout paper; 54 assorted screws, nuts, spacers. Ideal for beginners or simple circuits. **$6.75** (Not illustrated) Board as above but smaller.



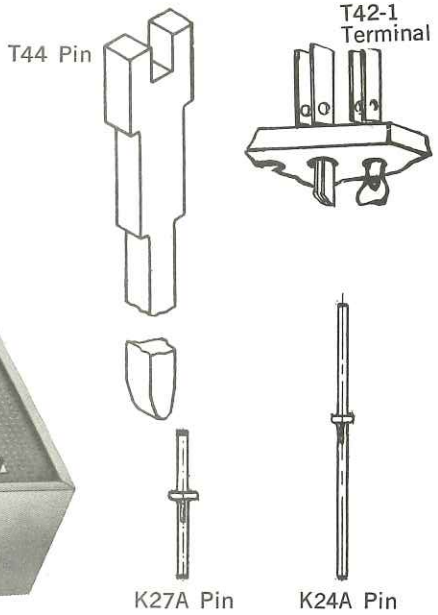
3677 Plugboard



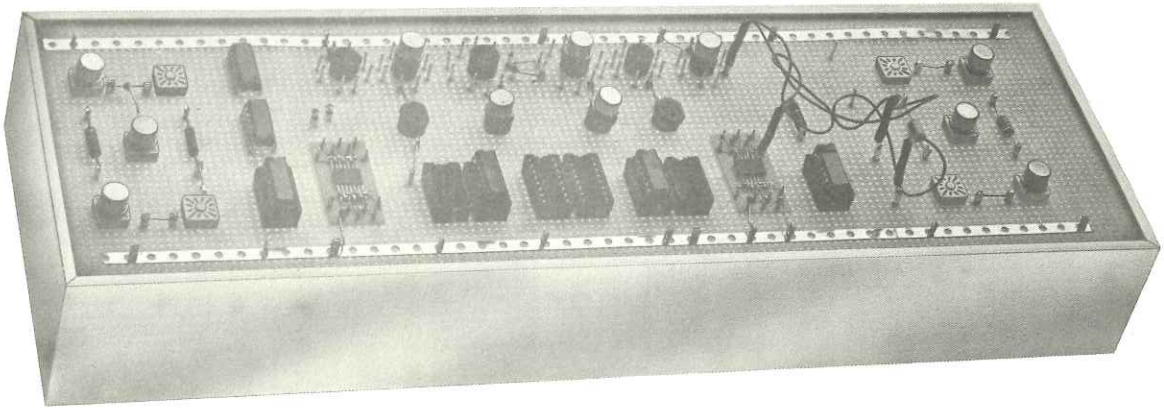
3682-2 Plugboard

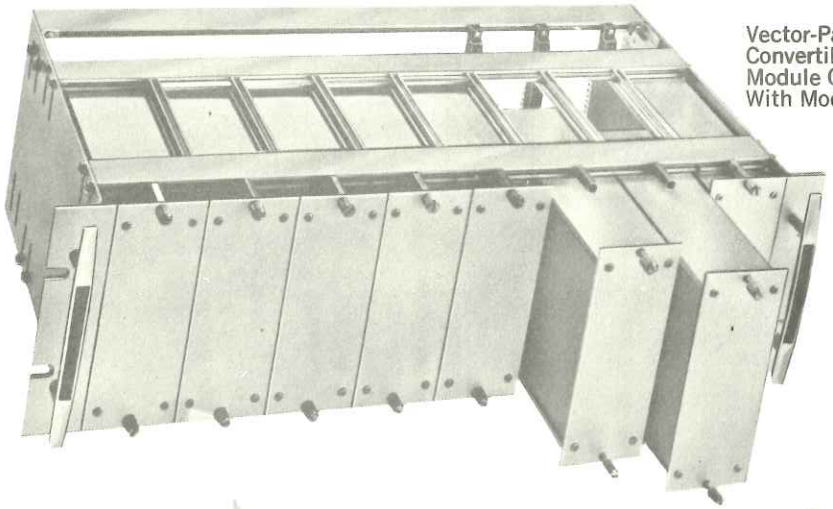


FPA-14-1 Flat-Pak Adapter

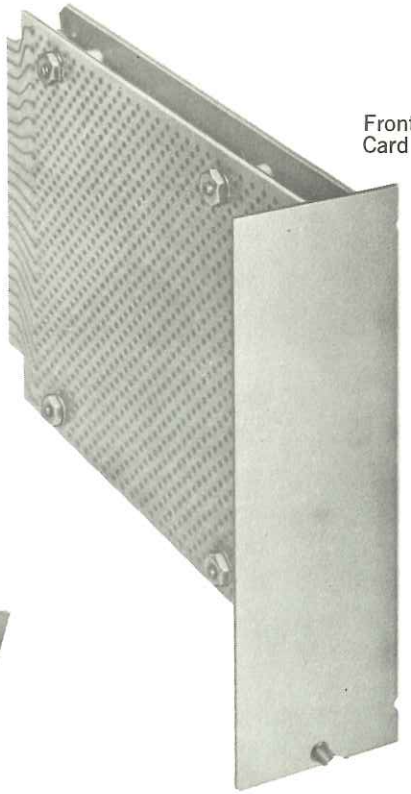


29X Integrated Circuit Kit

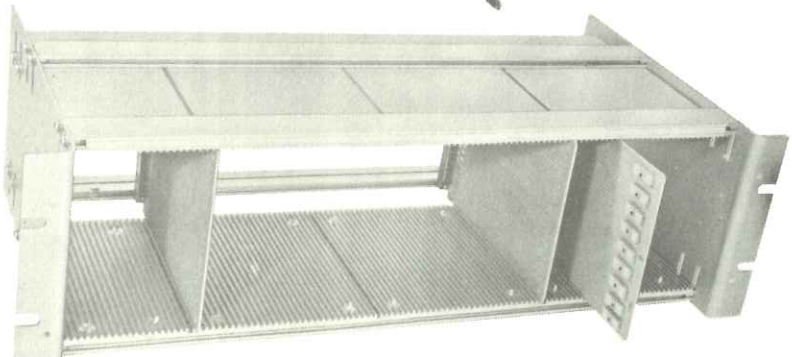




Vector-Pak
Convertible EFP
Module Cage
With Modules

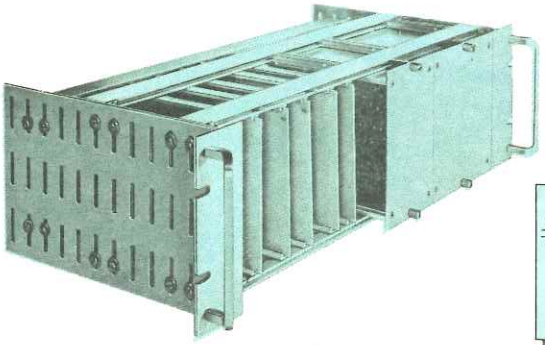


Front Panel
Card Mount



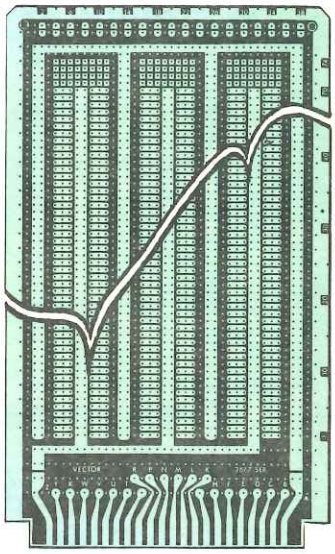
Vector-Pak Continuous

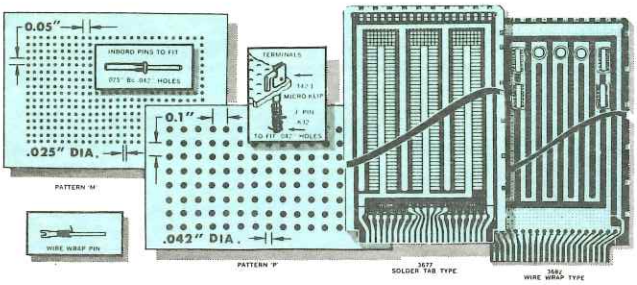
SEVERAL NEW VECTOR PRODUCTS



VECTOR-STRUT PACKAGING SYSTEM

DUAL-IN-LINE PLUGBORDS





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Vector structures for circuitry

Dear Sir:

Here is the literature you requested. We hope you find the information you're seeking. If you need additional product information, just fill in the details of your application or the product information you need on the reverse side, fold and mail. We'll pay the postage. Your information will be rushed to you immediately.

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( ) Micro-Vectorbord ®
( ) Terminals and Contacts
( ) Plugbords, General Use
( ) Plugbords, D.I.P. Use
( ) Sockets, I.C., Transistor, Tube
( ) Receptacles and Connectors
( ) Adapters, Socket, Flat-Pak, etc.
( ) Experimenter Kits
( ) Plug-In Cases, Small Round & Square
( ) Aluminum Cases, Extruded types, Plug-In and Instrument
( ) Patchbords and Patchcords, Manual and Pre-Programing

( ) Please include my name on your catalog mailing list.

If your address has changed, make corrections below, showing your correct Zip Code.

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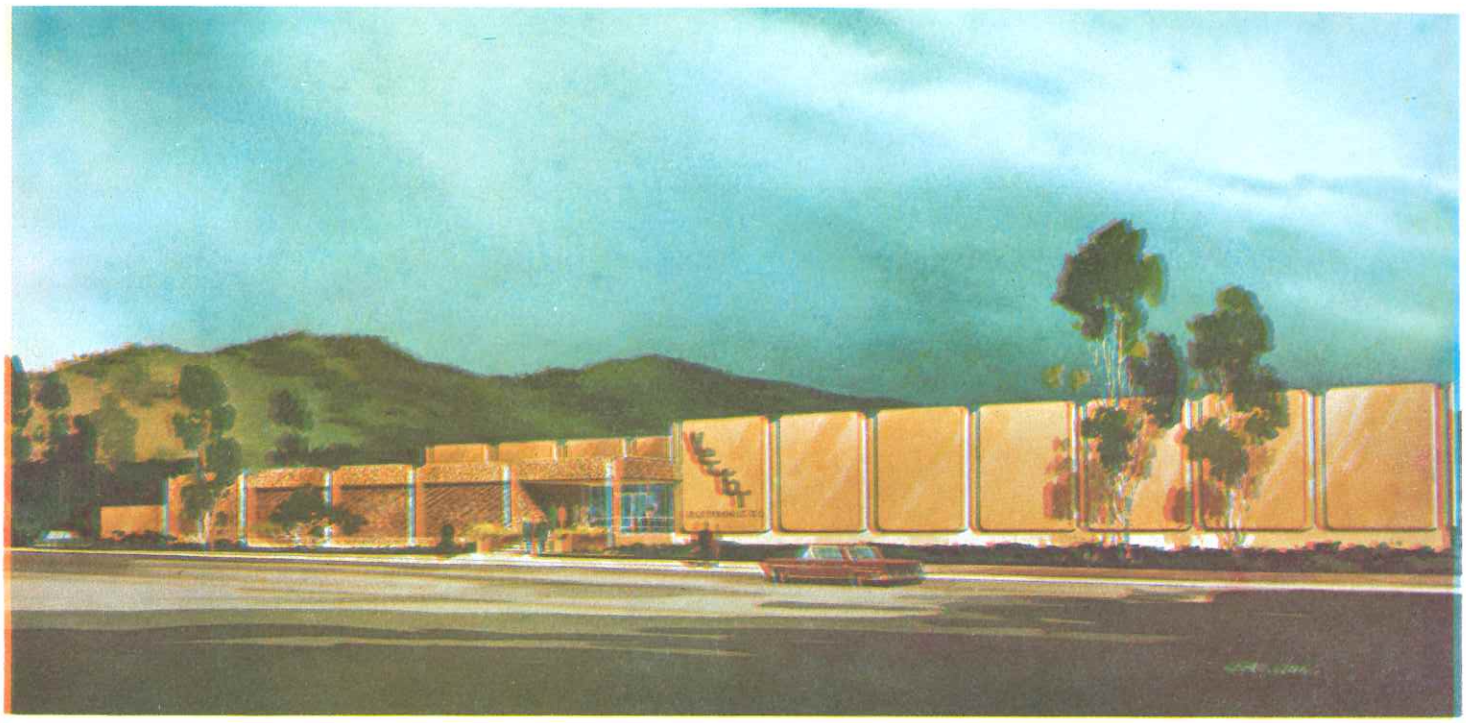
Zip Code _____

For your convenience, you can contact one of the Authorized Stocking Industrial Distributors shown on the enclosed Distributor List for immediate information.

R 640



VECTOR products are made in an ultra-modern 41,000 square foot plant in the new San Fernando Industrial Park of Sylmar only 45 minutes away from down-town Los Angeles via the Golden State Freeway. Here originate a large variety of unique mounting devices, many covered by VECTOR patents, which facilitate the assembly of electronic circuitry.

VECTOR ELECTRONIC COMPANY

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